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Notice of Allowability

Application No.

10/634,279

Examiner

Ted M. Wang

Applicant(s)

KIM, JU-HYUNG

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/09/2007.
2. ☒ The allowed claim(s) is/are 1,4-6,9 and 10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Response to Arguments

1. Applicants' amendments and arguments, filed on 03/29/2007, with respect to Claims 1, 2, 6 and 7 have been fully considered. The 35U.S.C.102(b) rejection has been overcome by rewritten those objected claims – dependent claims in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

2. Claims 1, 4-6, 9 and 10 are allowed.
3. The following is an examiner's statement of reasons for allowance.
 - The prior art fails to teach an apparatus of Claims 1, 4 and 6 that specifically comprises the following:
 - The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and the invention patented in Pat. No. US 5,928,293, US 6,584,163 and US 6,954,506. The improvement comprises that "a phase selector that selects an $(l+2)_{th}$ clock signal of the N clock signals as a recovered clock signal if an l_{th} clock signal of the N clock signals is in a first state and if an $(l+1)_{th}$ clock signal of the N clock signals is in a second state when a logic level transition of a received data is

detected, wherein I denotes an integer from 1 to N;" as recited in combination with other limitation in claims 1, 4 and 6, respectively.

US 5,928,293 teaches all subject matter of claim 1,4 and 6 with different operation of the phase selector. It **selects an (I-1)th clock signal** of the N clock signals as a recovered clock signal if an Ith clock signal of the N clock signals is in a first state and if an (I+1)th clock signal of the N clock signals is in a second state when a logic level transition of a received data is detected.

US 6,584,163 teaches all subject matter except for above features. The phase select signal is generated by a decision circuit based on the average value of the transition detector outputs. The operation is different from that of the allowable subject matter of the instant application.

US 6,954,506 teaches the phase select is based on the 8 phase states as shown in Fig.3. The phase select operation is described in column 5 lines 1-28, which is different from that of the allowable subject matter of the instant application.

No. US 5,928,293, US 6,584,163 and US 6,954,506, individual or in combination, do not teach the above features.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Reference(s) US 6,584,163 is cited because they are put pertinent to the multiphase clock recovery with phase selection. However, none of references teach detailed connection as recited in claim.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

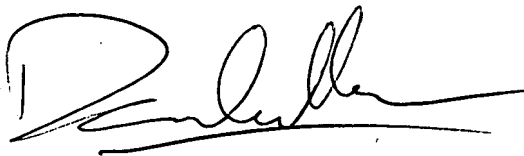
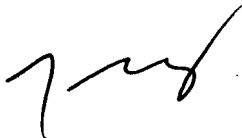
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Ted M Wang

Examiner

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Ted M. Wang



DAC HA
PRIMARY EXAMINER